

ABSTRACT

The present invention relates to a heterodyne interferometer system with a pre-processing of the target signal to isolate and remove self-interference signals using a known phase modulation of the carrier signal's frequency. Where self-interference
5 signals do not include a time delay inherent in the target signal that travels to the target reflector, by selecting a modulation frequency tuned to the time delay and then filtering the resultant signal the target beam can be isolated and the self-interference signal can be effectively removed. The system includes a modulation unit to apply a phase modulation to the carrier signal, and a mixing unit that demodulates the target signal at
10 the modulation frequency to isolate the target beam.

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